

REMARKS

After entry of this amendment, claims 1, 4-22, 25, 26, and 34-42 are pending. The claims have been amended without disclaimer or prejudice and find support *inter alia* in the original claims. The amendments to claims 1, 9, 11, 35, 36, and 39-42 find further support in the specification, for example, at page 17, lines 4, 35-36. No new matter has been added.

Rejections under 35 U.S.C. 103

Bewert et al. in view of Bedford et al. and Couteau et al.

Claims 1-9, 11-20, 25-26, 34-38, and 41-42 were rejected under 35 U.S.C. 103(a) for allegedly being obvious over Bewert *et al.* (hereinafter “Bewert”) in view of Bedford *et al.* (hereinafter “Bedford”) and Couteau *et al.* (hereinafter “Couteau”). Applicants respectfully disagree and traverse the rejection. Nonetheless, in order to expedite prosecution, the claims have been amended without prejudice or disclaimer and recite that the stabilizing agent comprises at least one isolated plant protein.

The Examiner bears the initial burden of establishing *prima facie* obviousness. See *In re Rijckaert*, 9 F.3d 1531, 1532, 28 USPQ2d 1955, 1956 (Fed. Cir. 1993). To support a *prima facie* conclusion of obviousness, the prior art must disclose or suggest all the limitations of the claimed invention. See *In re Lowry*, 32 F.3d 1579, 1582, 32 USPQ2d 1031, 1034 (Fed. Cir. 1994); see also *Abbott Labs. v. Sandoz, Inc.*, 544 F.3d 1341 (Fed. Cir. 2008) (“[t]he KSR opinion ... did not mention or affect the requirement that each and every claim limitation be found present in the combination of the prior art references before the analysis proceeds.”).

Bewert discloses use of soybean meal to produce a phytase spray dried preparation. Bewert does not disclose that the spray dried formulation produced has any effect regarding thermal stability on the phytase formulation, as also acknowledged by the Examiner. Additionally, Bewert does not disclose use of any isolated plant proteins nor disclose a stabilizing agent being an isolated plant protein as recited in the present claims.

The Examiner relies on Bedford for allegedly disclosing thermal stability of phytase and that the interaction of the enzyme with the feed matrix will protect the enzyme from steam or

elevated temperature. However, Bedford does not remedy the deficiencies of Bewert. None of the references disclose how to stabilize an enzyme formulation comprising an enzyme against the severe heat and moisture conditions that would be encountered during the pelleting process for making the feed.

The Examiner further relies on Couteau for teaching gum Arabic as a stabilizing agent. Because the present claims do not recite gum Arabic, the Couteau reference is not applicable.

The Examiner concludes that it would allegedly be obvious to incorporate phytase in animal feed to take advantage of the protection offered by carbohydrates and proteins contained in the feed and further add gum Arabic as a stabilizing agent. The Examiner contends that it is the components of the feed such as carbohydrates and other proteins included within the animal feed that provide the stabilizing effect. Applicants respectfully disagree with the Examiner's interpretation and conclusions. The present invention rather relates to a "stabilized enzyme formulation" which itself is stabilized and which can be one of the many components that can then be heat pelleted to become an animal feed pellet. The enzyme formulation itself provides the protection or stability rather than the other ingredients in the feed as alleged by the Examiner. The Examiner appears to be referring to the thermal stabilization of the final feed pellet rather than the stability of one of the possible ingredients during the process of making the animal feed pellet.

Because none of the references, alone or in combination, disclose an isolated plant protein, an isolated plant protein as a stabilizing agent, or any stabilization based on an isolated protein in an enzyme formulation, the references do not teach or suggest all the limitations of the claims. Analogous to the holding in *Abbott Labs.*, because each and every claim limitation is not found in the combination of the references cited by the Examiner, Bewert, Bedford, and Couteau do not render the claims obvious and thus a *prima facie* case of obviousness has not been established.

For at least these reasons, reconsideration and withdrawal of the obviousness rejection is respectfully requested for the independent claims and the claims dependent therefrom. *See In re Fine*, 837 F.2d 1071, 1076 (Fed. Cir. 1988) (holding that if an independent claim is nonobvious

then any claim dependent therefrom is nonobvious).

Bewert in view of Bedford and Couteau further in view of Harz et al.

Claims 10 and 21-22 were rejected under 35 U.S.C. 103(a) for allegedly being obvious over Bewert in view of Bedford and Couteau further in view of Harz *et al.* (hereinafter “Harz”). Applicants respectfully disagree and traverse the rejection.

The explanations provided above for Bewert, Bedford, and Couteau are equally applicable to this rejection and are incorporated herein in their entirety.

The Examiner acknowledges that Bewert, Bedford, and Couteau do not teach coating enzyme containing granules and relies on Harz for this teaching. As explained above, the combined teaching of Bewert, Bedford, and Couteau does not arrive at the claimed invention. The granule taught by combining the references cited by the Examiner would still not be a stabilized enzyme formulation or granule comprising an isolated plant protein as a stabilizing agent whether or not it was coated. Since Harz is relied on for teaching coating, Harz does not remedy the deficiencies of Bewert, Bedford, and Couteau.

Because none of the references, alone or in combination, disclose an isolated plant protein, an isolated plant protein as a stabilizing agent, or any stabilization based on an isolated protein in an enzyme formulation, the references do not teach or suggest all the limitations of the claims. Analogous to the holding in *Abbott Labs.*, because each and every claim limitation is not found in the combination of the references cited by the Examiner, Bewert, Bedford, Couteau, and Harz do not render the claims obvious and thus a *prima facie* case of obviousness has not been established.

Furthermore, claims 10 and 20-21 are dependent claims and accordingly comprise all the limitations of the claims from which they depend. As explained above for the independent claims, because Bewert, Bedford, and Couteau, alone or in combination, do not teach or disclose an isolated plant protein, an isolated plant protein as a stabilizing agent, or any stabilization based on an isolated plant protein in an enzyme formulation, the independent claims are non-obvious. Because the independent claims are non-obvious, the claims dependent therefrom are

likewise non-obvious. *See In re Fine*, 837 F.2d 1071, 1076 (Fed. Cir. 1988) (holding that if an independent claim is nonobvious then any claim dependent therefrom is nonobvious).

Reconsideration and withdrawal of the rejection is respectfully requested.

Bewert in view of Bedford and Couteau further in view of Cheng et al. and Andela et al.

Claims 39 and 40 were rejected under 35 U.S.C. 103(a) for allegedly being obvious over Bewert in view of Bedford and Couteau further in view of Cheng *et al.* (hereinafter “Cheng”) and Andela *et al.* (hereinafter “Andela”). Applicants respectfully disagree and traverse the rejection.

The explanations provided above for Bewert, Bedford, and Couteau are equally applicable to this rejection and are incorporated herein in their entirety.

The Examiner acknowledges that Bewert, Bedford, and Couteau do not teach “promoting the growth of an animal by using phytase containing food” and relies on Cheng for this teaching (Office Action, page 5). The Examiner also acknowledges that Cheng is silent regarding feed conversion rates and relies on Andela for this teaching (Office Action, page 6). As explained above, however, the combined teaching of Bewert, Bedford, and Couteau does not arrive at the claimed invention. The use of the feed or granule taught by combining the references cited by the Examiner would still not be the use of the claimed stabilized enzyme formulation comprising an isolated plant protein as a stabilizing agent. Since Cheng and Andela are relied on for teaching methods of using an animal feed, Cheng and Andela do not remedy the deficiencies of Bewert, Bedford, and Couteau.

Because none of the references, alone or in combination, teach or suggest an isolated plant protein as a stabilizing agent or any stabilization based on an isolated plant protein in an enzyme formulation, the references do not teach or suggest all the limitations of the claims. Analogous to the holding in *Abbott Labs.*, because each and every claim limitation is not found in the combination of the references cited by the Examiner, Bewert, Bedford, Couteau, Cheng, and Andela do not render the claims obvious and thus a *prima facie* case of obviousness has not been established. Reconsideration and withdrawal of the rejection is respectfully requested.

CONCLUSION

For at least the above reasons, Applicants respectfully request withdrawal of the rejections and allowance of the claims. If any outstanding issues remain, the Examiner is invited to telephone the undersigned at the number given below.

This response is filed within the three-month period for response from the mailing of the Office Action dated September 15, 2009, to and including December 15, 2009. No fee is believed due. However, if a fee is due, the Director is authorized to charge our Deposit Account No. 03-2775, under Order No. 12810-00317-US from which the undersigned is authorized to draw.

Respectfully submitted,

By 
Roberte M. D. Makowski, Ph.D.

Registration No.: 55,421
CONNOLLY BOVE LODGE & HUTZ LLP
Correspondence Customer Number: 23416
1007 North Orange Street
P.O. Box 2207
Wilmington, Delaware 19899
(302) 658-9141
(302) 658-5614 (Fax)
Attorney for Applicants